

**OBSERVATIONAL STUDY ON THE KATABATIC WIND OVER EAST ANTARCTICA**

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Katabatic wind induced by local topography has long been recognized as one of the key climate variables of the low level Antarctic environment. The wind properties were analyzed based on the data observed on automatic weather stations at Dome A (80.3667°S, 77.3531°E), Eagle (76.2500°S, 77.0203°E) and LGB69 (70.5005°S, 77.0429°E) in the period from January to August 2005. The results show that the prevailing wind directions in stations of LGB69, Eagle and Dome A are ENE, NE and S respectively in winter and NE, ENE and S respectively in summer. There is distinct diurnal cycle of wind speed in summer and the variation of wind speed in winter could be related with synoptic processes. Local topography is vital to the development of the near-surface wind field. In addition, there are diurnal variation of air temperature in January and February and it disappears in other seasons.

For further study on the structure of Katabatic wind in Antarctic we plan to carry out a field experiment of atmospheric boundary layer near by the Zhongshan station. The sodar, sonic anemometer, short-wave and long-wave radiometers and gradient measurements will be used for the field experiment in the Chinese IPY2007/2008 programme.